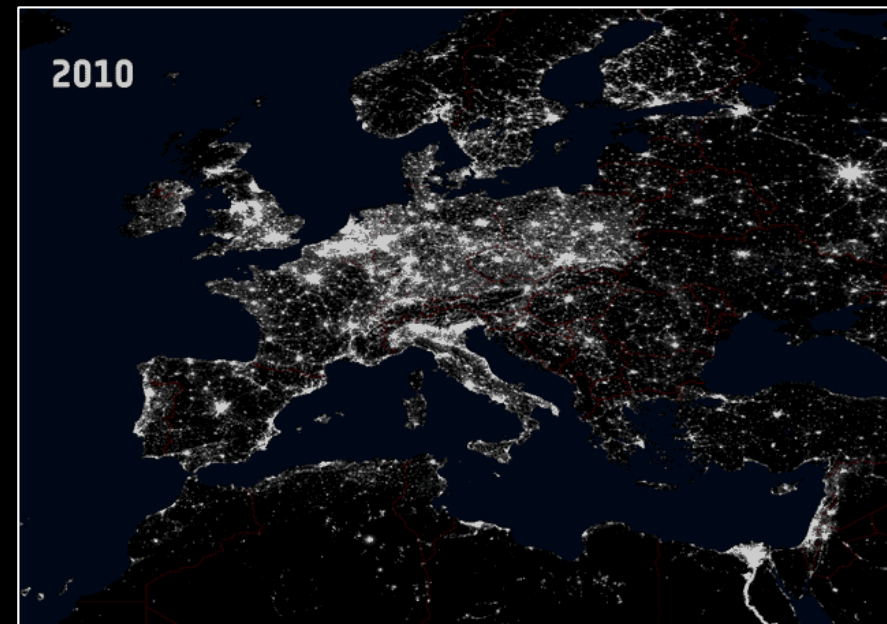
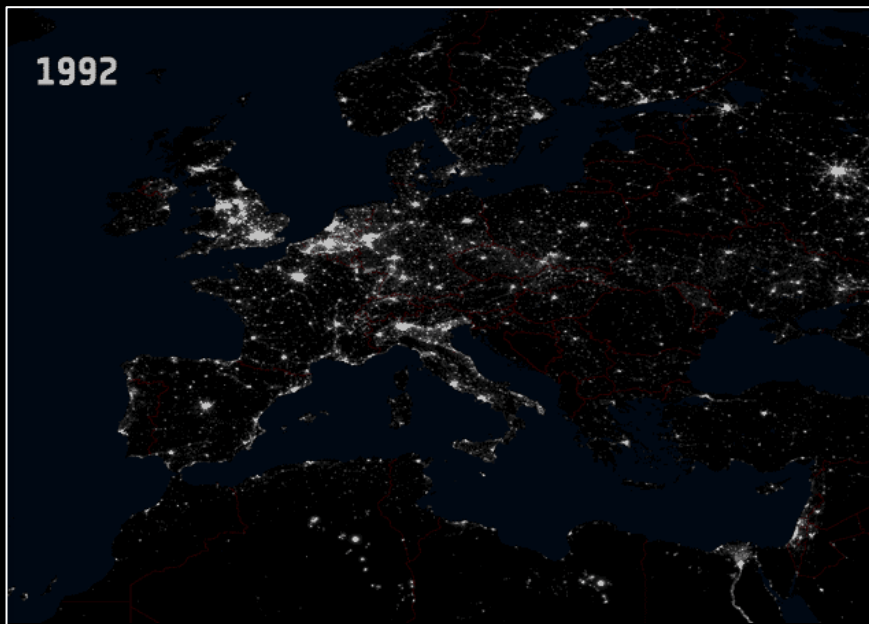




iCRAG

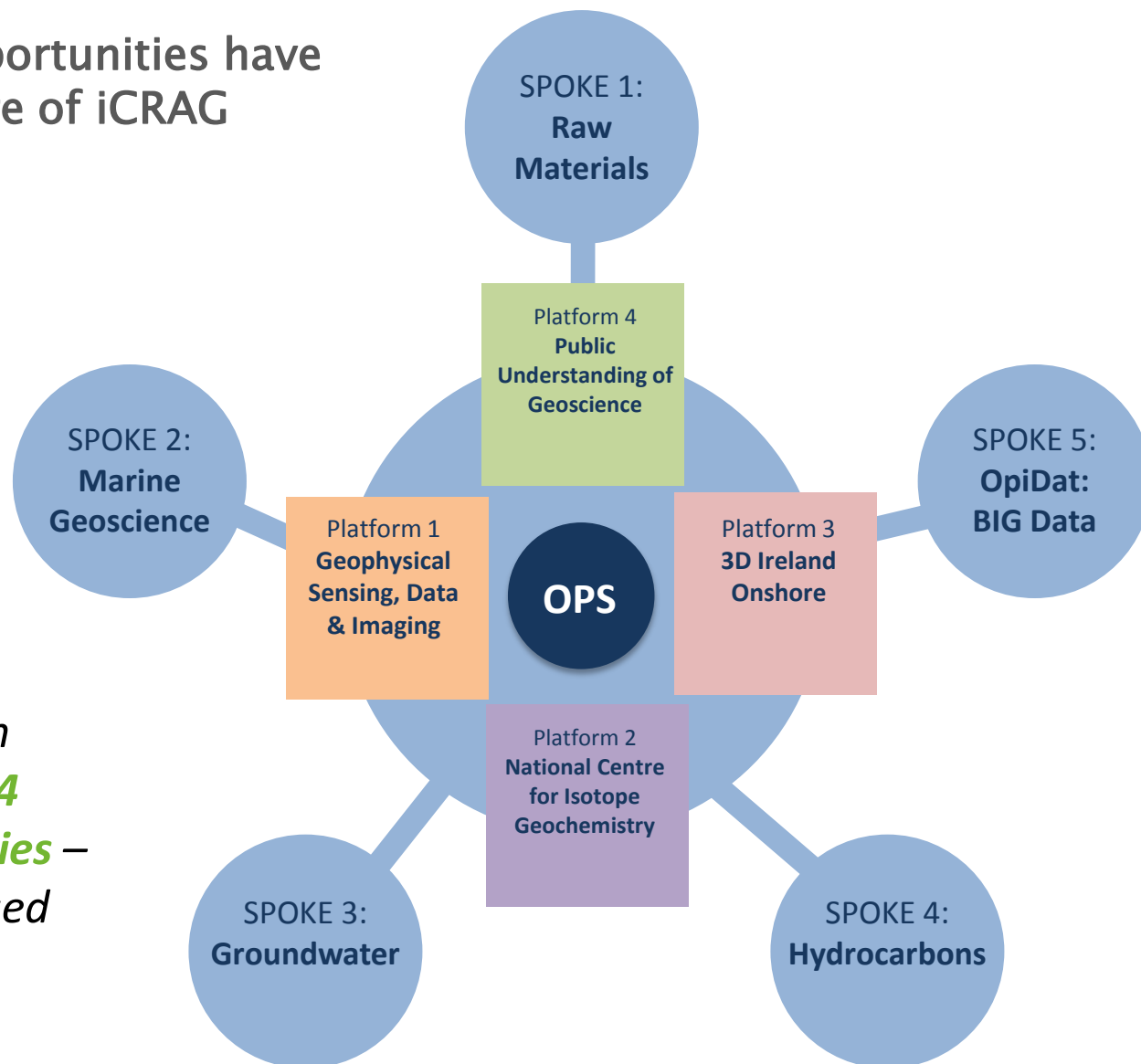
Irish Centre for Research
in Applied Geosciences : *an exciting
industry-facing geoscience initiative*

Growing world population puts pressure on all commodities and environment



Pressure on energy, raw materials and water resources are linked.

Challenges and opportunities have shaped the structure of iCRAG



5 spokes linked to different application areas, built around 4 enabling technologies – and equipment-based Platform projects.



Help unlock Ireland's natural resources

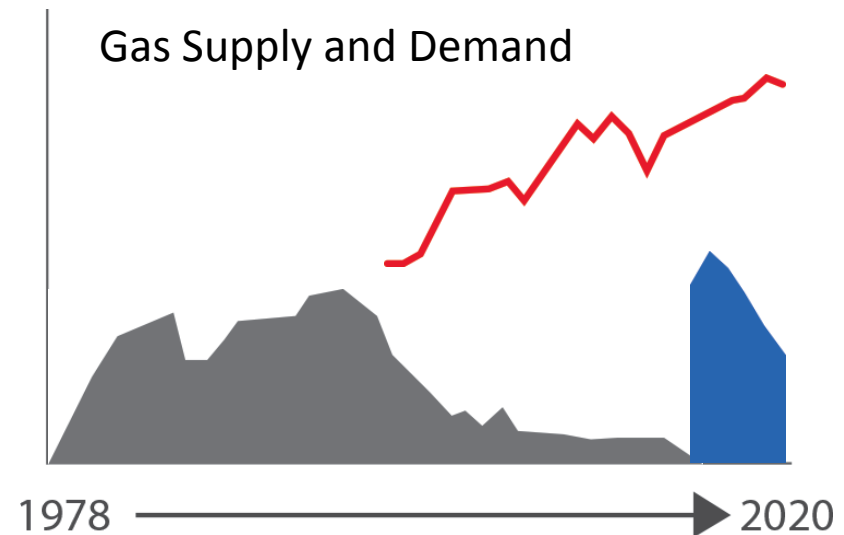
How do we de-risk?

- Better descriptions of the geology.
- Improved understanding and models of the geology and related processes.
- Innovative techniques for predicting the location and nature of resources.
- Improved methods for optimising the production of resources.



Security of supply of energy, principally oil/gas

The Corrib Gas field comes on stream in 2015 and will provide >50% of Ireland's gas requirements– one or two more gas discoveries would guarantee gas supply for Ireland.



SPOKE 4:
Hydrocarbons



Education and training for geoscientists and improved geosciences information to decision makers and the general public.

Public perception and understanding can be a challenge to geoscience sector projects – support and information is important.

*Shell's Corrib gas project has led to **€1 billion** spend with 300 Irish companies and with more than **1000 people** employed.*



Platform 4
Public
Understanding of
Geoscience

iCRAG's AMBITION

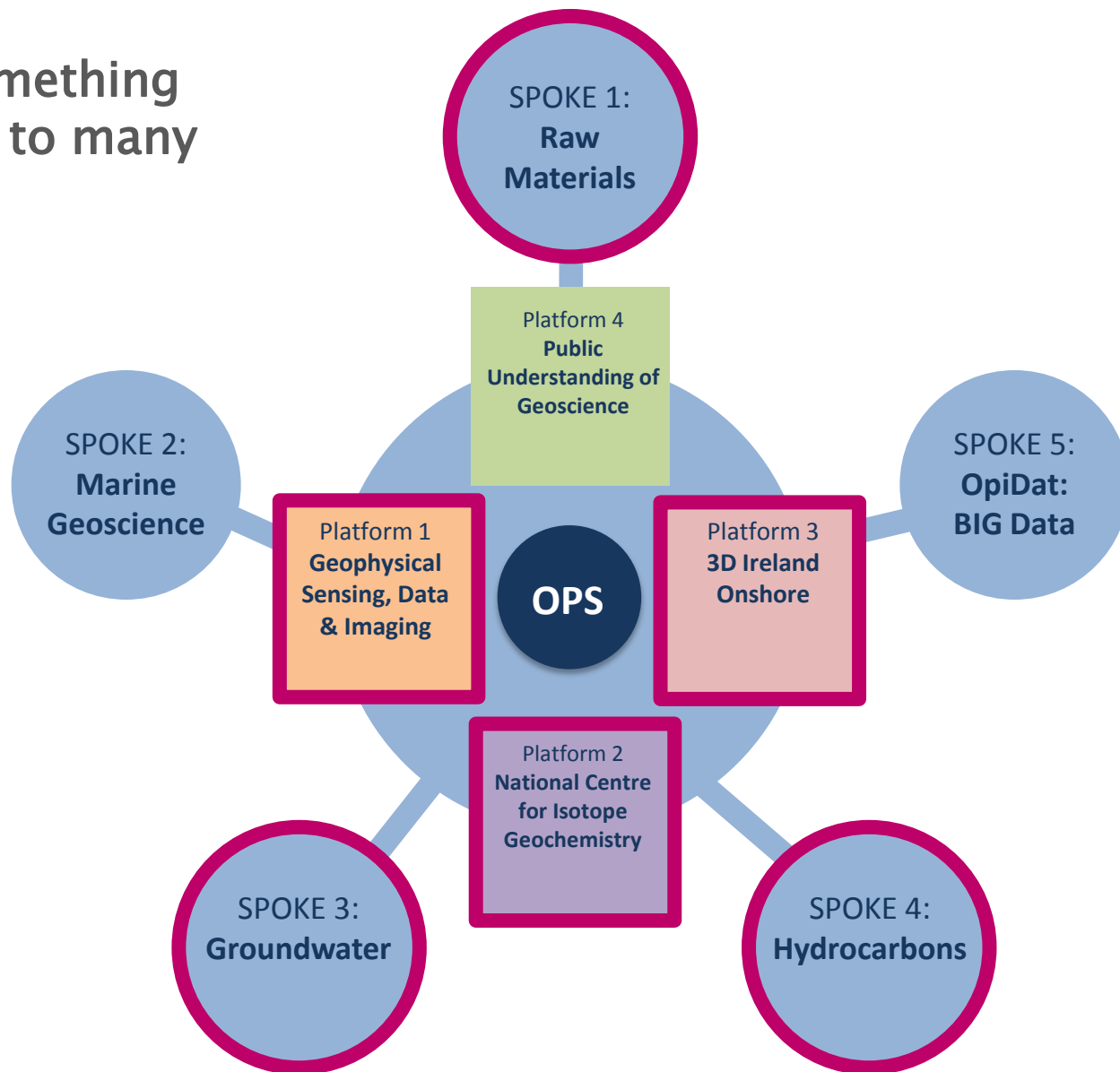
To achieve international excellence in applied geoscience research in full range of application areas – requires scale and a multi-disciplinary approach.



State-of-the-art methods, sometimes borrowed from one discipline or industry, combined with technical insights, potentially arising from another.



Fluid Flow is something that is common to many spokes



iCRAG TEAM



University/Research Institutes:

UCD, TCD, DIAS, NUIG, NUIM and UCC.

9 Principal Investigators and 37 Funded Investigators



Industry:

53 companies from all geoscience application areas.

Ranges from Irish companies to multi-nationals – including multi-company alliances PIPCO and Geoscience Ireland.



Government:

GSI (Geological Survey of Ireland), EPA, Teagasc



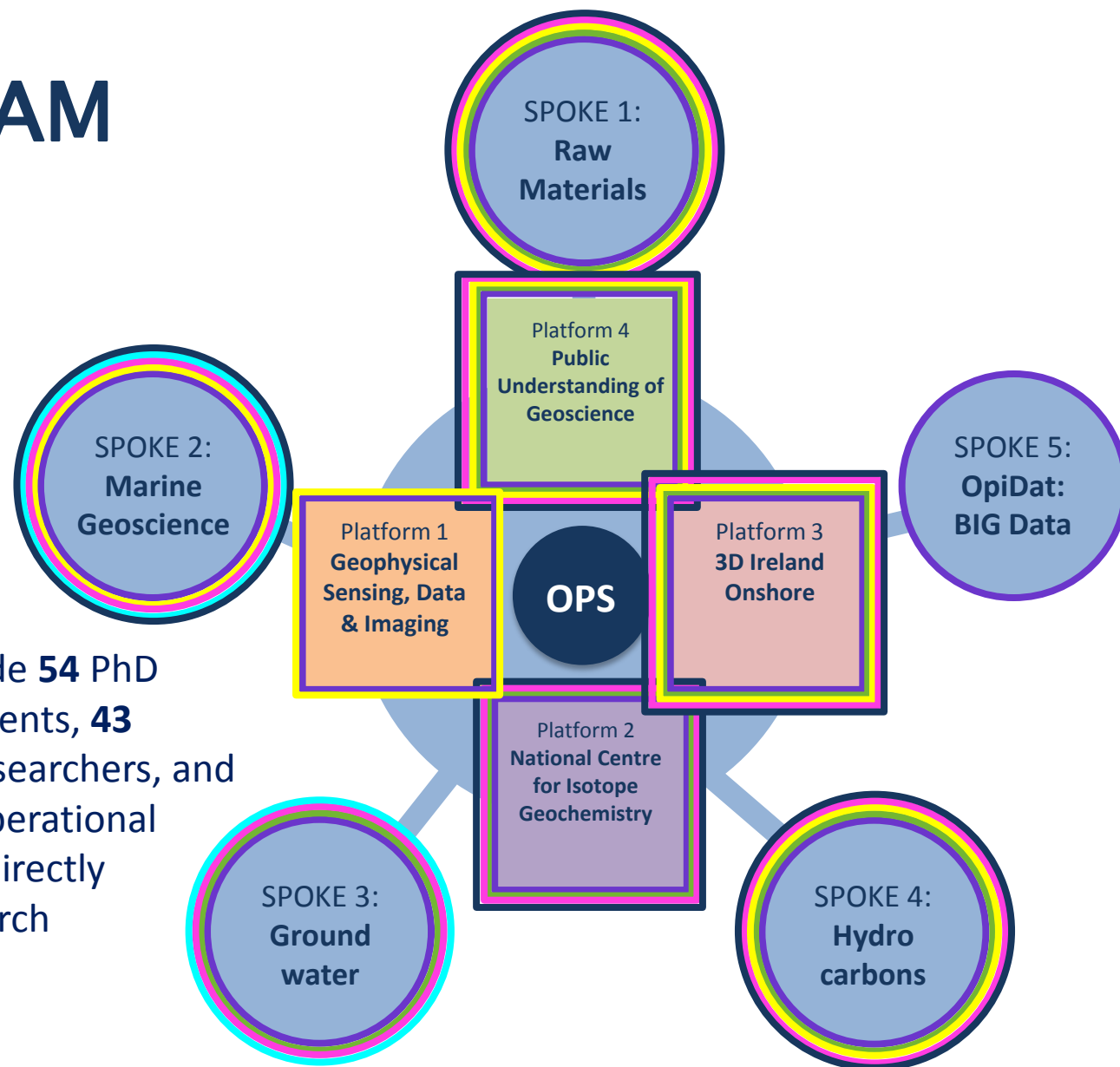
International Collaborators:

41 Collaborators from 15 countries. Includes leading international experts

iCRAG TEAM



The centre will include **54** PhD students, **8** MSc students, **43** Postdoctoral level researchers, and **6** members of the Operational Management team directly supporting the research programme team.



Spoke 4: Hydrocarbon Targeted projects

Project: TP4.1: Sediment tracking

Development of sediment tracking techniques for the oil and gas exploration industry and associated predictive tools for reservoir sandstone distribution and quality.

Project: TP4.2: Basin evolution and petroleum systems

Improved understanding of the evolution of reservoir and trap architecture in sedimentary basins from early rift to hyperextended passive margins, providing better predictive capability for prospectivity.

Project: TP4.3: Reservoir modelling and software development

Production of new workable models of sedimentological and structural reservoir heterogeneity that will assist in maximising oil and gas recovery in complex reservoirs and the associated development of new reservoir modelling software techniques for the hydrocarbon industry.

Project: TP4.4: Unconventional hydrocarbons

Assessment of unconventional hydrocarbon potential in the Irish offshore and onshore, including natural gas hydrates and shale gas, identification of potential exploration and production techniques and their associated geoscientific risks.

Project: TP4.5: Global Subsurface Training Centre

To develop a global subsurface training and information centre combining behind-outcrop cores and associated outcrop and borehole data from the Clare Basin, western Ireland, a centre which will provide unique training and outreach capabilities.

iCrag

- ➔ Critical mass for Irish Geosciences.
- ➔ International leader in broad range of Applied Geosciences.
- ➔ Increased EU and industry funding.
- ➔ Sustainable Centre of Excellence.
- ➔ The portal for industry.
- ➔ Secure maximum benefit for Ireland from confronting the key economic and societal challenges of the Geosciences.

